

4647

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Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

....., Director

State: North Carolina

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 4647
Hydrographic }

LOCALITY

Beaufort

Beaufort Entrance

E. End of Bogue Sound

1927

CHIEF OF PARTY

F. L. Peacock

June 28, 1927.

T.H.

(11)

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 4647

Locality: **NORTH CAROLINA, BEAUFORT ENTRANCE.**

Chief of Party: **F. L. Peaseok, 1927.**

Plane of reference is **M L W**

4.9 ft. on tide staff at **Morehead City.**

Condition of records satisfactory except as checked below:

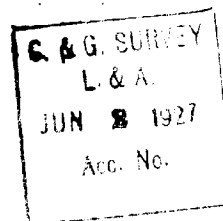
1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

E. H. ...

Chief, Division of Tides and Currents.

Original

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
E. LESTER JONES, DIRECTOR



U. S. C. & G. S. LAUNCH MIKAWA

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SHEET
BEAUFORT HARBOR, NORTH CAROLINA.
1927.

FRED. L. PEACOCK, H. & G. ENGINEER, C. & G. SURVEY
CHIEF OF PARTY

DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SHEET
BEAUFORT HARBOR, NORTH CAROLINA.
LAUNCH MIKAWA
1927
FRED. L. PEACOCK, CHIEF OF PARTY

PURPOSE AND LIMITS:

The principal purpose of the Hydrography executed on this sheet was to introduce the Junior Officers in training, to hydrographic methods, particularly with respect to small boat hydrography with hand lead in depths less than ten fathoms.

Another purpose was to determine by surveying a portion of Beaufort Harbor if changes had occurred which would make a general hydrographic revision of this harbor desirable.

The area surveyed is a part of Beaufort Harbor and extends from longitude $76^{\circ} 42' 52''$ on the west to longitude $76^{\circ} 41' 38''$ on the east and from marsh line to marsh line on the north and south. This work was done with the whaleboat. One line of soundings was also run with the U. S. C. & G. S. Launch MIKAWA and follows the channel from longitude $76^{\circ} 41' 17''$ latitude $34^{\circ} 41' 17''$ thru the harbor entrance to Beaufort Harbor entrance gas buoy. 2.2 statute miles 14° from Fort Macon Coast Guard Station.

It was expected earlier in the season that a much greater area would be accomplished but due to prevailing bad weather this was impossible.

METHODS AND EQUIPMENT:

The line of soundings taken from the Launch consisted of up and down casts with the handlead line and 8 pound lead, made from the sounding chair on the starboard side of the vessel. Positions were taken about every two minutes and were the usual three point fixes.

The remainder of the hydrography was executed with the whaleboat propelled by a dinghy, with an outboard motor attached, towing alongside. This method of propulsion proved very satisfactory in smooth water but made very wet work of it when the sea became choppy.

The method of development was by a system of north and south lines, with occasional cross lines as a check on the soundings. The maximum spacing of the sounding lines was about 90 meters. All soundings were up and down casts of the hand lead line and 8 pound lead. Positions were taken about every two minutes and at the beginning and end of all lines and were the usual three point fixes. Due to inexperience on the part of the steersman some of the lines were not very straight. Ranges were steered when available but not very accurately.

The time interval between soundings when using the whale-boat was twenty seconds.

On the line of soundings run with the Launch the time interval varied from twenty to thirty seconds depending on the depth of water.

The three lead lines used were made from Samson No. 8 braided mahogany tiller line with phosphor bronze wire center and were graduated to fathoms, half fathoms, and feet. All lead lines were checked against an accurate standard before and after each days work. Practically all lead line correction is eliminated with this type of line, the largest correction being 0.2 feet.

CONTROL:

The control consists of a large number of triangulation stations as follows; Glen, Church Spire Red, Weather, Morehead, Cupola S. E., Flag Biological Station, Beaufort Tank, Bat, Beacon E, Beacon F, Beacon G, Beacon H, Beacon I, and Car. Most of these stations are beacons and other objects which are more or less permanent as hydrographic signals. Plane table signals Hi, Lo, Jac, and Hot were also used.

PERSONAL EMPLOYED:

The hydrographic party was continuously in charge of Fred. L. Peacock, H. & G. Engineer, as instructor. The remainder of the party was made up of Officers under training, with the exception of Engineer Palmer who ran the outboard motor.

The Officers who received instruction and practice in small boat hydrography during the progress of this work were E. A. Deily, Jr. H. & G. Engineer, P. C. Doran, Jr. H. & G. Engineer, J. Bowie, Aid, J. H. Brittain, Aid, C. A. Schanck, Aid, H. O. Fortin, Aid, and G. W. Lovesee, Deck Officer. These officers took turns as right and left anglemen, recorder, leadsman, and steersman.

RESULTS:

The results obtained showed very little if any change from the previous survey in the area investigated.

The character of the bottom in the deeper water is a firm hard grey sand with some broken shell and occasional soft spots. No rocks were encountered in this region. The shoaler areas are similar except for more areas of soft or sticky mud. In the very shoal water there are occasional patches of grassy bottom.

No dangers other than the shoal areas on the sides of the channel exist in this area. No new dangers were found. The soundings appear to meet the usual standard of accuracy. All lines or portions of lines the position of which seemed in anyway doubtful have been either rejected in the original record or have been omitted from the smooth hydrographic sheet.

In some respects the work is not up to standard, especially the recording. The record books are not as neat and legible as is desirable and much of the useful information usually recorded is lacking.

This resulted from the inexperience of the subordinate members of the party and their rotation in the several duties which prevented them from becoming proficient at any one operation in the short time available for experience in this class of work.

Had it been possible to continue on hydrography for a longer period a marked improvement would undoubtedly have been shown within a very few days.

N. B. The depth curves were not penciled on the smooth sheet by the field party. They have however been drawn on the boat sheet.

Approved:-

Fred. L. Peacock
Fred. L. Peacock,
H. & G. E., C. & G. Survey,
Chief of Party.

Respectfully submitted:-

George W. Lovesee
George W. Lovesee,
Deck Officer, C. & G. Survey.

June 1, 1927.

STATISTICS

Area in square statute miles 1.5

Date, 1927	Letter	Volume	Positions	Soundings	Miles Statute	Vessels
April 6	a	I	144	719	13.9	Whaleboat
April 7	b	II	69	334	6.9	Whaleboat
April 15	c	II	113	533	12.5	Whaleboat
April 15	A	I	20	74	2.5	MIKAWA
Total -----				346	1660	35.8

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

September 20, 1927.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4647

Beaufort Entrance, North Carolina

Surveyed in 1927

No specific instructions issued for this work.

Chief of Party, Fred L. Peacock.

Surveyed by F. L. P.

Protracted by G. W. Lovesee.

Soundings plotted by G. W. L.

Verified and inked by C. A. George, Dan M. Watt.

1. The records conform to the requirements of the General Instructions with the exception that soundings were reduced by the field party to fathoms and feet instead of feet and tenths. The necessary changes were made in the office. Also, no fixes were recorded for most of the buoys that are shown on the sheet.
2. The plan and character of development conform to the requirements of the General Instructions with the exception that more soundings should have been taken in the vicinity of the charted 11 and 14 foot soundings at the junction of the channels leading into Bogue Sound and to Adams Creek.
3. The sounding line crossings are adequate.
4. The usual depth curves could be completely drawn.
5. The usual field plotting was done by the field party except that a portion of the channel line (19 A - 20 A) was omitted.
6. No additional work is required within the limits of this survey except in the vicinity of the charted 11 and 14 foot soundings (authority, H. 3436) mentioned in paragraph 2 above. A comparison with the old survey, H. 3436, shows only slight changes except at the 11 foot spot, where 19 feet was obtained. The least sounding obtained in the vicinity of the 14 foot spot was 16 feet, but the development being incomplete there is no assurance that the least depth was obtained.

From a careful study of the soundings on the two surveys, it is believed that while there has probably been a deepening in the vicinity of the 11 foot sounding, it has probably not deepened to the extent of 19 feet as shown on the new survey. It is therefore recommended that both the 11 and 14 foot soundings be retained on the charts until further examination definitely disproves them.

7. Character and scope of surveying - very good.
Field drafting - good.
8. Reviewed by A. L. Shalowitz, September, 1927.

Approved:

Chief, Section of Field Records (Charts)

Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 4647

4647

State North Carolina

General locality Atlantic Coast Beaufort

Locality Beaufort Entrance ~~Harbour~~ and East End of Bogue Sound.

Chief of party Fred. L. Peacock, H. & G. E.

Surveyed by Fred. L. Peacock, H. & G. E.

Date of survey April 6, 7, & 15, 1927

Scale 1 = 10,000

Soundings in Feet

Plane of reference Mean Low Water.

Protracted by G. W. L. Soundings in pencil by G. W. L.

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, Tide books, Marigrams, Boat sheets,

3 Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet

Remarks: